



RECEIVED

SEP 13 2001

TECH CENTER 1600/2900

SEQUENCE LISTING

<110> Ebersole, Richard C.  
Hendrickson, Edwin

<120> NUCLEIC ACID FRAGMENTS FOR THE IDENTIFICATION OF DECHLORINATING  
BACTERIA

<130> BC1002 US NA

<140> US 09/548,998

<141> 2000-04-14

<150> 60/129,511

<151> 1999-04-15

<160> 60

<170> Microsoft Office 97

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<212> DNA

<213> Denhalococcoides ethenogenes

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24

<210> 2

<211> 1377

<212> DNA

<213> Dehalococcoides ethenogenes

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cggtacctgt ggaataagct tcggctaact acgtgccagc agccgcggta atacgtagga 480  
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tgtgaaattt cccggcttaa ccgggacgtg tcattcaata ctgttggaact agagtacagc 600  
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aggcgaaggc ggttttctag gttgtcactg acactgaggc tcgaaagcgt ggggagcgaa 720  
cagaattaga tactctggtg gtccacgcct taaactatgg acactaggta tagggagtat 780  
cgaccctctc tgtgccgaag ctaacgctyt aagtgtcccg cctggggagt acggtcgcaa 840  
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agttggagtt gctagtaacc gcatatcagc aaggtgcggt gaatacgttc tcgggccttg 1320  
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<212> DNA

<213> Dehalococcoides ethenogenes

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aactgaaggt aataccgcat gtggtgggccc gacataagtt ggttcactaa agccgtaagg 180  
tgcttggtga ggggcttgcg tccgattagc tagttggtgg ggtaacggcc taccaaggct 240  
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actcctacgg gaggcagcag caaggaatct tgggcaatgg gcgaaagcct gaccagcaa 360  
cgccgcgtga gggatgaagg ctctcgggtt gtaaacctct tttcacaggg aagaataatg 420  
acggtacctg tggaataagc ttcggctaac tacgtgccag cagccgcggt aatacgtagg 480  
aagcaagcgt tatccggatt tattgggcgt aaagtgagcg taggtggtct ttcaagttgg 540  
atgtgaaatt tcccggctta accgggacgt gtcattcaat actgttggaac tagagtacag 600  
caggagaaaa cggaattccc ggtgtagtgg taaaatgcgt agatatcggg aggaacacca 660  
gaggcgaagg cggttttcta ggttgact gacactgagg ctcgaaagcg tggggagcga 720  
acagaattag atactctggt agtccacgcc ttaaactatg gacactaagt atagggagta 780  
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aagttggagt tgctagtaac cgcataatcag caaggtgcgg tgaatacggt ctcgggcctt 1320  
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<210> 4

<211> 1377

<212> DNA

<213> Dehalococcoides ethenogenes

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aactgaaggt aataccgcat gtggtgggcc gacatatgtt ggttcactaa agccgtaagg 180  
cgcttggtga ggggcttgcg tccgattagc tagttggtgg ggtaatggcc taccaaggct 240  
tcgatcggta gctggtctga gaggatgac agccacactg ggactgagac acggcccaga 300  
ctcctacggg aggcagcagc aaggaatctt gggcaatggg cgaaagcctg acccagcaac 360  
gccgcgtgag ggatgaaggc tttcgggttg taaacctctt ttcataggga agaataatga 420  
cggtagctgt ggaataagct tcggctaact acgtgccagc agccgcggta atacgtagga 480  
agcaagcggt atccggattht attgggcgta aagtgcgctg aggtggtctt tcaagttgga 540  
tgtgaaattht cccggcttaa ccgggacgag tcattcaata ctgttgact agagtacagc 600  
aggagaaaac ggaattcccg gtgtagtggg aaaatgcgta gatatcggga ggaacaccag 660  
aggcgaaggc ggttttctag gttgtcactg aactgaggc tcgaaagcgt ggggagcgaa 720  
cagaattaga tactctggta gtccacgcct taaactatgg aactaggta tagggagtat 780  
cgaccctctc tgtgccgaag ctaacgcttht aagtgtcccg cctggggagt acggtcgcaa 840  
ggctaaaact caaaggaatt gacgggggcc cgcacaagca gcgagcgtg tggtttaatt 900  
cgatgctaca cgaagaacct taccaagatt tgacatgcat gtagtagtga actgaaaggg 960  
gaacgacctg ttaagtcagg aactgcaca ggtgctgcat ggctgtcgtc agctcgtgcc 1020  
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gcgagactgc cccgcgaaac ggggaggaag gtggggatga cgtcaagtca gcatggcctt 1140  
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tggagctaat ccccaaagct gtcctcagtht cggattgcag gctgaaaccc gcctgcatga 1260  
agttggagtht gctagtaacc gcatatcagc atggtgcggg gaatacgttc tcgggccttg 1320  
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<210> 5

<211> 1377

<212> DNA

<213> Dehalococcoides ethenogenes

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aactgaaggt aataccgcat gtggtgggcc gacatatgtt ggttcactaa agccgtaagg 180  
cgcttggtga ggggcttgcg tccgattagc tagttggtgg ggtaatggcc taccaaggct 240  
tcgatcggta gctggtctga gaggatgatc agccacactg ggactgagac acggcccaga 300  
ctcctacggg aggcagcagc aaggaatctt gggcaatggg cgaaagcctg acccagcaac 360  
gccgcgtgag ggatgaaggc ttccgggttg taaacctctt ttcataaggga agaataatga 420  
cggtacctgt ggaataagct tcggctaact acgtgccagc agccgcggta atacgtagga 480  
agcaagcggt atccggattt attgggcgta aagtgagcgt aggtggtctt tcaagttgga 540  
tgtgaaattt cccggcttaa ccgggacgag tcattcaata ctgttggaact agagtacagc 600  
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cagaattaga tactctggta gtccacgcct taaactatgg acactaggta tagggagtat 780  
cgaccctctc tgtgccgaag ctaacgcttt aagtgtcccg cctggggagt acggtcgcaa 840  
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gaacgacctg ttaagtcagg aacttgaca ggtgctgcat ggctgtcgtc agctcgtgcc 1020  
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tggagcta at ccccaaagct gtcctcagtt cggattgcag gctgaaaccc gcctgcatga 1260  
agttggagtt gctagtaacc gcatatcagc atggtgcggt gaatacgttc tcgggccttg 1320  
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<210> 6

<211> 1377

<212> DNA

<213> Dehalococcoides ethenogenes

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aactgaaggt aataccgcat gtggtgggcc gacataagtt ggttcactaa agccgtaagg 180  
tgcttggtga ggggcttgcg tccgattagc tagttggtgg ggtaacggcc taccaaggct 240  
tcgatcggta gctggtctga gaggatgatc agccacactg ggactgagac acggcccaga 300  
ctcctacggg aggcagcagc aaggaatctt gggcaatggg cgaaagcctg acccagcaac 360  
gccgcgtgag ggatgaaggc tctcgggttg taaacctctt ttcacaggga agaataatga 420  
cggtacctgt ggaataagct tcggctaact acgtgccagc agccgcggta atacgtagga 480  
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cagaattaga tactctggta gtccacgcct taaactatgg aactaggta tagggagtat 780  
cgaccctctc tgtgccgaag ctaacgcttht aagtgtcccg cctggggagt acggtcgcaa 840  
ggctaaaact caaaggaatt gacgggggcc cgcacaagca gcgagcgtg tggtttaatt 900  
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agttggagtht gctagtaacc gcatatcagc aaggtgcggt gaatacgttc tcgggccttg 1320  
tacacaccgc ccgtcacgtc atgaaagccg gtaacacttg aagtcgatgt gccaac 1377

<210> 7

<211> 1443

<212> DNA

<213> Dehalococcoides ethenogenes

<220>

<221> misc\_feature

<222> (1353)..(1353)

<223> N = A or G or C or T/U, unknown or other (any)

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aactgaaggt aataccgcat gtgatgggct gacataagtc ggttcattaa agccgcaagg 180  
tgcttggtga ggggcttgcg tccgattagc tagttggtgg ggtaatggtc taccaaggct 240  
tcgatcggta gctggtctga gaggatgac agccacactg ggactgagac acgggccaga 300  
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gccgcgtgag ggatgaaggc ttctgggttg taaacctctt ttcacaggga agaataatga 420  
cggtagctgt ggaataagct tcggctaact acgtgccagc agccgcggta atacgtaggg 480  
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ctgcatgaag ttggagttgc tagtaaccgc atatcagcaa ggtgcggtga atacgttctc 1320

gggccttgta cacaccgccc gtcacgtcat ganagccggt aacacttgaa gtcgatgtgc	1380
caaccgcaag gaggcagtcg ccgaggggtgg gactggtaat tgggacgaag tcgtaacaag	1440
gta	1443

<210> 8

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Consensus sequence derived from DHE-PL, DHE-STF, DHE-DAB, DHE-PIN  
and DHE-DLL at bases E180-E226.

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<221> misc\_feature

<222> (5)..(5)

<223> R = A or G

<220>

<221> misc\_feature

<222> (11)..(11)

<223> Y = C or T

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<221> misc\_feature

<222> (18)..(18)

<223> W = A or T

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<222> (21)..(21)

<223> Y = C or T



<220>

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<221> misc\_feature

<222> (37)..(37)

<223> Y = C or T

<220>

<221> misc\_feature

<222> (42)..(42)

<223> Y = C or T

<400> 8

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47

<210> 9

<211> 20

<212> DNA

<213> Dehalococcoides ethenogenes

<400> 9

aagtcgaacg gtcttaagca

20

<210> 10

<211> 20

<212> DNA

<213> Dehalococcoides ethenogenes

<400> 10  
cgtcattatt cttccctgtg 20

<210> 11

<211> 21

<212> DNA

<213> Dehalococcoides ethenogenes

<400> 11  
gggaaacgac ctgttaagtc a 21

<210> 12

<211> 22

<212> DNA

<213> Dehalococcoides ethenogenes

<400> 12  
ggattagctc cagttcacac tg 22

<210> 13

<211> 20

<212> DNA

<213> Dehalococcoides ethenogenes

<400> 13  
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<210> 14

<211> 19

<212> DNA

<213> Dehalococcoides ethenogenes

<400> 14  
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<210> 15

<211> 18

<212> DNA

<213> Dehalococcoides ethenogenes

<400> 15

gggagtatcg accctctc

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<210> 16

<211> 18

<212> DNA

<213> Dehalococcoides ethenogenes

<400> 16

agtgaaccga aagggaaa

18

<210> 17

<211> 21

<212> DNA

<213> Dehalococcoides ethenogenes

<400> 17

gggttgtaaa cctcttttca c

21

<210> 18

<211> 20

<212> DNA

<213> Dehalococcoides ethenogenes

<400> 18

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20

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<210> 20  
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<213> Dehalococcoides ethenogenes

<400> 21  
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<210> 22  
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<213> Dehalococcoides ethenogenes

<400> 22  
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<210> 23  
<211> 22

<212> DNA

<213> Dehalococcoides ethenogenes

<400> 23

aatggacaga acaatagggt gc

22

<210> 24

<211> 21

<212> DNA

<213> Dehalococcoides ethenogenes

<400> 24

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<211> 20

<212> DNA

<213> Dehalococcoides ethenogenes

<400> 25

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<210> 26

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<212> DNA

<213> Dehalococcoides ethenogenes

<400> 26

taaccgggac gwgtcattca

20

<210> 27

<211> 19

<212> DNA

<213> Dehalococcoides ethenogenes

<400> 27  
gagtacagca ggagaaaac

19

<210> 28

<211> 21

<212> DNA

<213> Dehalococcoides ethenogenes

<400> 28  
cctccttgcg gttggcacat c

21

<210> 29

<211> 19

<212> DNA

<213> Dehalococcoides ethenogenes

<400> 29  
ggcagtcctcg ctagaaaat

19

<210> 30

<211> 51

<212> DNA

<213> Artificial Sequence

<220>

<223> Consensus sequence derived from DHE-PL, DHE-STF, DHE-DAB, DHE-PIN  
and DHE-DLL at bases E1001-E1047.

<220>

<221> misc\_feature

<222> (3)..(3)

<223> W = A or T

<220>

<221> misc\_feature

<222> (14)..(14)

<223> M = A or C

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<222> (22)..(22)

<223> R = A or G

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<222> (43)..(43)

<223> R = A or G

<220>

<221> misc\_feature

<222> (44)..(44)

<223> M = A or C

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51

<210> 31

<211> 18

<212> DNA

<213> Dehalococcoides ethenogenes

<400> 31  
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18

<210> 32

<211> 27

<212> DNA

<213> Dehalococcoides ethenogenes

<400> 32

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27

<210> 33

<211> 1542

<212> DNA

<213> Dehalococcoides ethenogenes

<400> 33

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tgtctgggaa actgcctgat ggagggggat aactactgga aacggtagct aataccgcat 180  
aacgtcgcaa gaccaaagag ggggaccttc gggcctcttg ccatcgatg tgcccagatg 240  
ggattagcta gtaggtgggg taacggctca cctaggcgac gatccctagc tgggtctgaga 300  
ggatgaccag ccacactgga actgagacac ggtccagact cctacgggag gcagcagtgg 360  
ggaatattgc acaatgggag caagcctgat gcagccatgc cgcgtgtatg aagaaggcct 420  
tcgggttgta aagtactttc agcggggagg aaggaggtaa agttaatacc tttgctcatt 480  
gacgttacc gcagaagaag caccggctaa ctccgtgcc gcagccgagg taatacggag 540  
gggtgcaagc ttaatcgga ttactgggag taaagcgac gcaggcggtt tggttaagtca 600  
gatgtgaaat ccccgggctc aacctgggaa ctgcatctga tactggcaag cttgagtctc 660  
gtagaggggg gtagaattcc aggtgtagcg gtgaaatgag tagagatctg gaggaatacc 720  
ggtaggggag ggggccccct ggacgaagac tgacgctcag gtgcgaaagc gtggggagca 780  
aacaggatta gataccctgg tagtccacgc cgtaaagcat gtcgacttgg aggttgtgcc 840  
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